Generation IV Interim Roadmap

GIF Policy and Experts Meeting: Rio de Janeiro
July 9–10, 2002

Overview of this Segment

- *Roadmap Update*   *15 min*

- *Focus on Interim Roadmap Messages*   *15 min*
  - *Motivation for Gen IV and the roadmap*
  - *Introduction to the roadmap process*
  - *Presentation of major findings*

- *Comments on the Interim Roadmap*   *60 min*

Roadmap Events from May to Present

- **TWGs and CGs issue R&D Scope Reports**   *May 24, and Jun 21*

- **INTD Submittals received**   *Jun 16*

- **Boston Quarterly Meeting**   *Jun 25-27*
  - **Review R&D for overlaps or omissions**
  - **Agree on general prioritization of R&D**
  - **Prepare written sections on R&D for the roadmap**
  - **Prepare suggested R&D timelines**
  - **INTD review and recommendations**

- **RIT prepared a 'Draft Interim Roadmap' (v21)**   *Jun 26*

- **Secretariat sent out the 'Draft Interim Roadmap' to the GIF (v27)**   *Jul 3*

Selected Roadmap Milestones in 2002

	Scheduled	Actual
Concept selection complete	Feb/Mar	21 May
Interim Roadmap	31 May	26 Jun
GRNS Review Meeting (DC)		31 Jul – 1 Aug
R&D Integration Plan	28 Jun	~mid Aug
Final Roadmap (draft)	02 Aug	~late Aug
Final Roadmap	27 Sep	27 Sep

Roadmap Report Structure

The Roadmap will be a two-part document:

- **Roadmap Summary (~20 pages)**
  - **Written for non-technical audience**
  - **Sets the context and summarizes recommendations**

- **Technical Roadmap (~100 pages)**
  - **Written for nuclear technical audience**
  - **Provides technical descriptions, analysis, and justifications**

Detailed reports will be on CD-ROM

Steps to Creating the Technical Roadmap

Technical Roadmap was planned in Three Steps:

Draft: Introduction and Selection of Systems   ~20 pages

Interim: … add R&D Gaps and Needs   add ~60 pages

Final: … add R&D Integration and Planning   add ~20 pages

- **Your review copy has Introduction and Selection of Systems**

- **The R&D Gaps and Needs are in rough draft, and have considerably more technical content**

Upcoming Reviews and Steps

- *GIF will review the Draft-level version and provide comments following this presentation*

- *We propose sending the Interim Roadmap to GIF members in mid-August.*

- *We expect to complete the draft Final Roadmap during August, and send it out at the end of August*
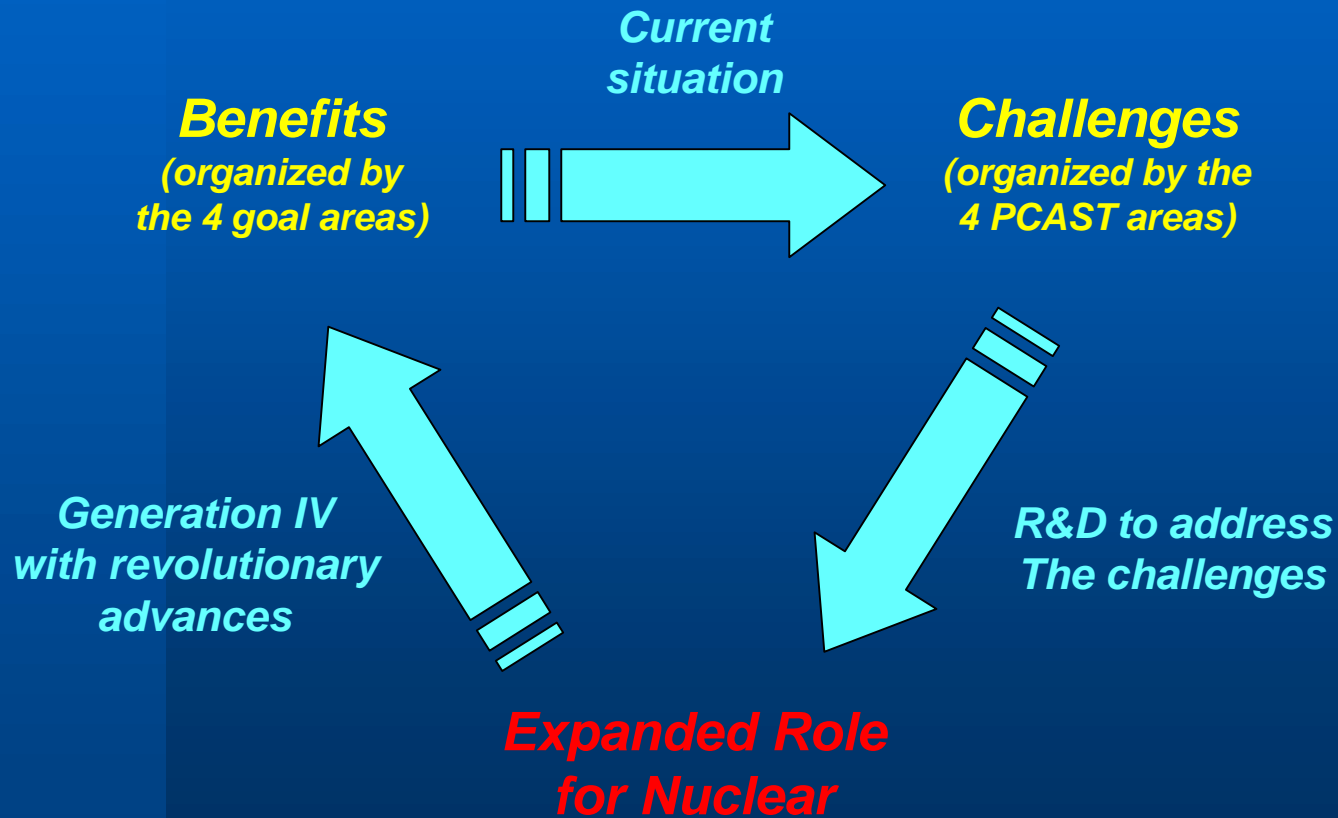
Overview of the Draft Interim Roadmap

Three Sections:

- *An Expanded Role for Nuclear Energy*
  - *Motivation for Generation IV and its R&D*

- *The Technology Roadmap in Brief*
  - *Overview of the roadmap process*

- *Findings of the Roadmap*
  - *Conclusions*
  - *Recommended Generation IV Systems*
  - *Connections back to meeting the challenges and achieving the benefits*
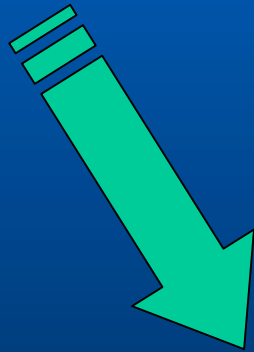
1. *Motivation for Generation IV and R&D*

Current situation

Benefits
(organized by the 4 goal areas)

Challenges
(organized by the 4 PCAST areas)

Generation IV with revolutionary advances

R&D to address The challenges

Expanded Role for Nuclear

Generation
IV

2. Introducing the Process

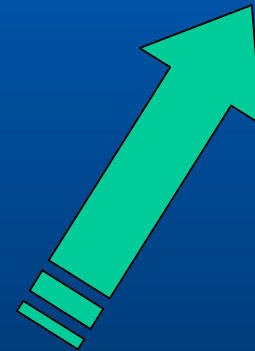**Generation IV International Forum**

Generation IV Goals

Roadmap Project

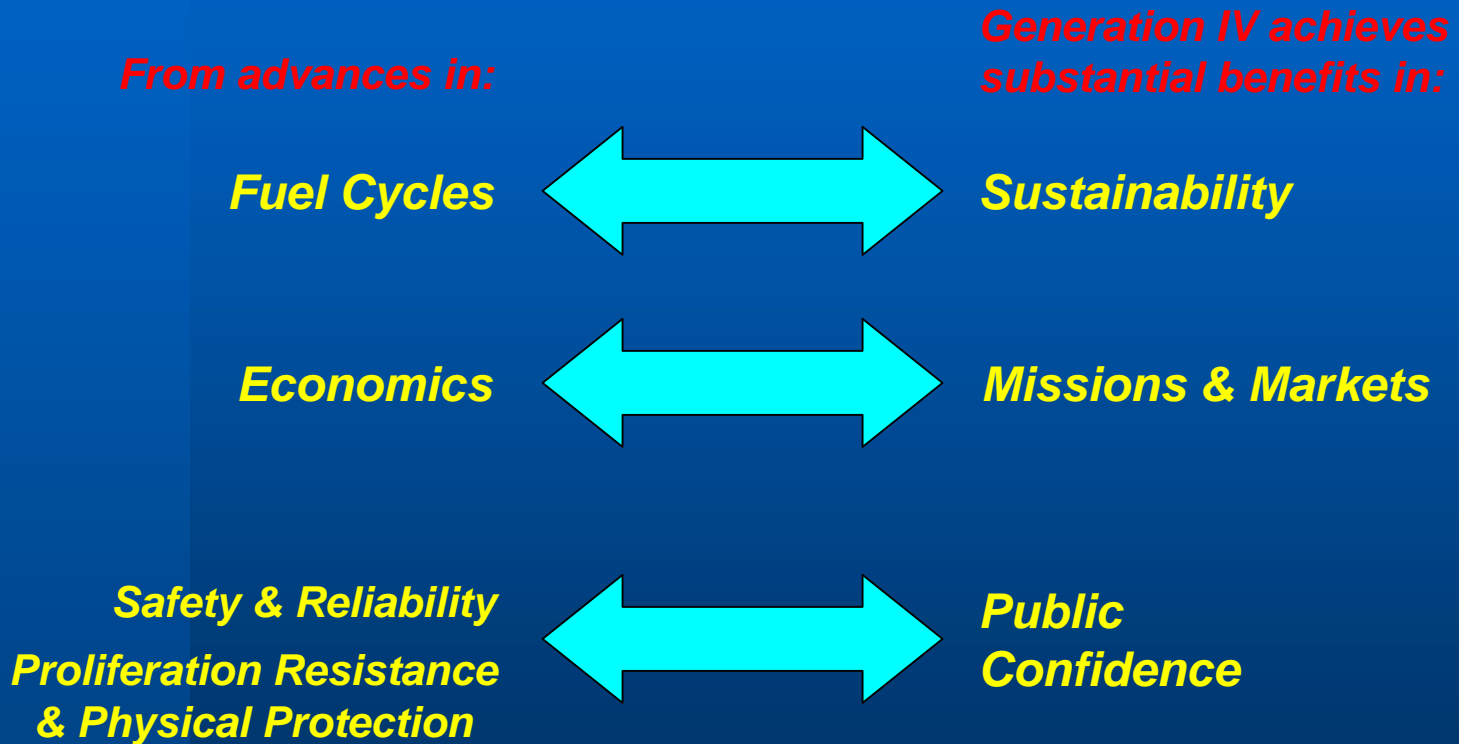**Evaluation & Selection Process**

3. Presenting the Findings

Sustainability

Six
Generation IV
Systems

Economics

Safety &
Reliability

Proliferation
Resistance &
Physical
Protection

Near-Term
Deployment
Opportunities
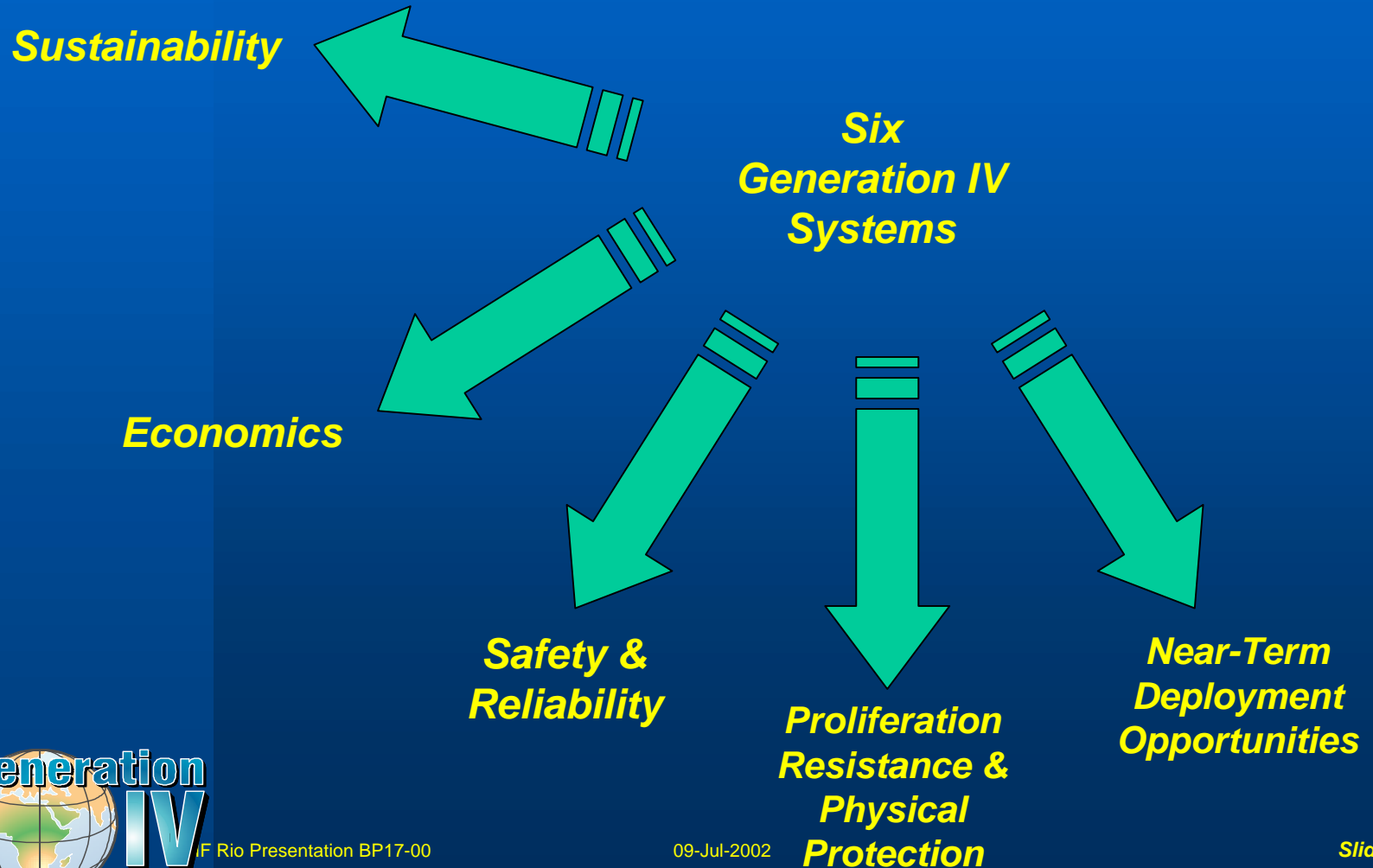
Simplified Connections

From advances in:

Generation IV achieves substantial benefits in:

Fuel Cycles ⬌ **Sustainability**

Economics ⬌ **Missions & Markets**

Safety & Reliability
Proliferation Resistance & Physical Protection ⬌ **Public Confidence**

Discussion and Comment Period

- *Comments will be captured on-screen*

- *Discussion and comment on any aspect is welcome*

- *Special interest in the treatment of:*
  - *Motivation for Generation IV and its R&D*
  - *Description of the roadmap process*
  - *Four goal areas*
  - *International participation*
  - *Recommended systems and their attributes*
  - *Recognition for INTD*